



# System Requirements for Cisco Unity Release 7.x

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## Revised October 26, 2009

This document lists requirements for installing a Cisco Unity system running version 7.x, as well as information on available languages and the characteristics of the Unified Messaging and Voice Messaging configurations. It contains the following sections:

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## Hardware Requirements

- [Hardware Requirements—Cisco Unity Server, page 2](#)
- [Hardware Requirements—Cisco Unity Voice-Recognition Server, page 2](#)



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## Hardware Requirements—Cisco Unity Server

- A server that meets Cisco Unity specifications. Refer to the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).


**Caution**

Cisco TAC does not provide any assistance for installing, customizing, or troubleshooting Cisco Unity on a platform that is not on the *Cisco Unity Supported Platforms List*.

- Voice cards that are approved for use with Cisco Unity. (If you are integrating Cisco Unity with Cisco Unified Communications Manager, the integration does not require voice cards.) See the “Supported Voice Cards” and “Other Supported Phone System Integrations” sections in *Supported Hardware and Software, and Support Policies for Cisco Unity Release 7.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/support/7xcusupp.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/support/7xcusupp.html).

If you are installing a Cisco Unity system outside the United States and you are connecting it directly to the central office by using an analog loop, you may need to install inline telco filters on the Intel Dialogic voice cards to filter tax impulse signals. For more information, refer to the Intel Dialogic documentation and regulatory notices that ship with the voice cards.

- The necessary cables, line splitters, and adapters to connect the voice cards to the phone system. For information about the cables and other components required for each type of circuit-switched phone system integration, see the “Other Supported Phone System Integrations” section in *Supported Hardware and Software, and Support Policies for Cisco Unity Release 7.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/support/7xcusupp.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/support/7xcusupp.html).

If you are installing cards that have H.100 connectors, you need to connect the cards by using an H.100 cable that has at least as many connectors as you have cards (you must connect all cards by using a single cable) but no more than five extra connectors.

## Hardware Requirements—Cisco Unity Voice-Recognition Server

- A server that meets Cisco Unity voice-recognition server specifications. Refer to the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).


**Caution**

Cisco TAC does not provide any assistance for installing, customizing, or troubleshooting Cisco Unity voice-recognition software on a platform that is not listed on the *Cisco Unity Supported Platforms List* as supported for voice recognition.

Cisco Unity voice recognition is not supported for integrations with phone systems through voice cards. Subscribers with extensions on a phone system that is integrated to Cisco Unity through voice cards cannot use the voice-recognition feature.

## Software Requirements

- [Software Requirements—Cisco Unity Server, page 3](#)
- [Software Requirements—Cisco Unity Voice-Recognition Server, page 5](#)
- [Software Requirements—Message Store, page 6](#)

- [Software Requirements—Subscriber Workstations, page 12](#)

**Note**

If you plan to run Cisco Security Agent for Cisco Unity on the Cisco Unity server, some versions of required software are not supported. Refer to the “Software Requirements” section of *Release Notes for Cisco Security Agent for Cisco Unity* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_release_notes_list.html).

## Software Requirements—Cisco Unity Server

- A supported 32-bit version of Microsoft Windows Server 2003 or Windows 2000 Server:
  - Windows Server 2003 R2 Enterprise Edition
 

Supported for all Domino, Exchange 2007, and Exchange 2003 configurations. When Exchange 2000 is the message store, supported only when an Exchange Server 2003 server is available to be the partner Exchange server.
  - Windows Server 2003 R2 Standard Edition
 

Supported for all Domino, Exchange 2007, and Exchange 2003 configurations. When Exchange 2000 is the message store, supported only when an Exchange Server 2003 server is available to be the partner Exchange server.
  - Windows Server 2003 Enterprise Edition
 

Supported for all Domino, Exchange 2007, and Exchange 2003 configurations. When Exchange 2000 is the message store, supported only when an Exchange Server 2003 server is available to be the partner Exchange server.
  - Windows Server 2003 Standard Edition
 

Supported for all Domino, Exchange 2007, and Exchange 2003 configurations. When Exchange 2000 is the message store, supported only when an Exchange Server 2003 server is available to be the partner Exchange server.
  - Windows 2000 Server
 

Supported only on selected servers. For more information, see the “Operating System” section of the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).
  - Windows 2000 Advanced Server
 

Supported only on selected servers. For more information, see the “Operating System” section of the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).

These Windows versions are supported in English, French, German, and Japanese.

**Caution**

To use the Cisco Unity Server Updates wizard to install Microsoft updates for Windows, SQL Server 2000 or MSDE 2000, Internet Explorer, and Exchange, you must install the English-language version of those applications. If you install them in another language, you must download Microsoft updates from the Microsoft website.

The Cisco Unity Platform Configuration discs install Windows Server 2003 or Windows 2000 Server in English. The discs that install Windows Server 2003 also install the Microsoft Multilingual User Interface, so you can localize the Windows user interface into the languages supported for use with Cisco Unity.

Cisco Unity is not qualified for use on Windows 2000 Professional or Windows 2000 Datacenter Server.

**Caution**

If Windows Server 2003 is installed on the Cisco Unity server, voice cards and voice card software will not function correctly. Consequently, circuit-switched phone system integrations that use voice cards are not supported for use with a Cisco Unity server on which Windows Server 2003 is installed. Note, however, that IP integrations (Cisco Unified Communications Manager and SIP) and PIMG/TIMG integrations are supported for use with a Cisco Unity server on which Windows Server 2003 is installed. The list of phone systems supported for PIMG/TIMG integrations is revised as new phone systems are qualified.

- The applicable version of Microsoft SQL Server:
  - On a system with more than 32 voice ports, Microsoft SQL Server 2000 Standard Edition
  - On a system with 32 or fewer voice ports, Microsoft SQL Server 2000 Desktop Engine (MSDE 2000)

Other editions of SQL Server and MSDE are not supported.

**Note**

A system that is using Cisco Unity failover requires SQL Server 2000 Standard Edition regardless of the number of voice ports. (See also [“Requirements for Cisco Unity Failover” section on page 18.](#))

- Microsoft Extensible Markup Language (MSXML) 3.0
- Microsoft Internet Explorer 6.0
- Microsoft .NET Framework 1.1 and 2.0
- Microsoft Visual C++ 2005 Redistributable DLLs
- Microsoft Windows Installer 3.1
- Microsoft Windows 2000 Server patch for MS06-051
- Business Objects Crystal Reports XI
- Cisco Unity-CM TSP version 8.3(1), if you are integrating Cisco Unity with Cisco Unified Communications Manager or Cisco Unified Communications Manager Express by using Skinny Call Control Protocol (SCCP).
- Cisco Unity 7.x
- The service packs listed in the following section, [“Minimum Service Packs Required—Cisco Unity Server.”](#)

## Minimum Service Packs Required—Cisco Unity Server

- Windows Server 2003 Service Pack 2 (with Windows 2003 on the Cisco Unity server)
- Windows 2000 Server Service Pack 4 (with Windows 2000 on the Cisco Unity server)
- SQL Server 2000 Service Pack 4 (with SQL Server 2000 on the Cisco Unity server)

- MSDE 2000 Service Pack 4 (with MSDE 2000 on the Cisco Unity server)
- Internet Explorer 6.0 Service Pack 1 when the Cisco Unity server is running Windows 2000 Server Service Pack 4
- Microsoft .NET Framework 2.0 Service Pack 1
- MSXML 3.0 Service Pack 7

We recommend that you also update the Cisco Unity server with the security updates that Microsoft releases monthly. Refer to *Software Installed by the Cisco Unity Server Updates Wizard* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/updates/wizard/cuupwz.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/updates/wizard/cuupwz.html).

For support information, refer to the “Support Policy for Microsoft Service Packs and Updates” section of *Supported Hardware and Software, and Support Policies for Cisco Unity Release 7.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/support/7xcusupp.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/support/7xcusupp.html).

## Software Requirements—Cisco Unity Voice-Recognition Server

- A supported version of Microsoft Windows Server 2003:
  - Windows Server 2003 R2 Enterprise Edition
  - Windows Server 2003 R2 Standard Edition
  - Windows Server 2003 Enterprise Edition
  - Windows Server 2003 Standard Edition

On the voice-recognition server, Windows Server 2003 is supported only in English.



**Note** Voice-recognition software must be installed on a separate voice-recognition server. Installing the software on the Cisco Unity server is not supported.

- The service packs listed in the following section, “[Minimum Service Pack Required—Cisco Unity Voice-Recognition Server](#).”
- The G.711 Mu-Law audio format is required on the voice-recognition server and the phone system.



**Caution**

Voice recognition does not work if the voice-recognition server or the phone system is using G.729a, or if existing messages, greetings, and names were recorded in an audio format other than G.711 Mu-Law.

## Minimum Service Pack Required—Cisco Unity Voice-Recognition Server

- Windows Server 2003 Service Pack 2

We recommend that you also update the Cisco Unity voice-recognition server with the security updates that Microsoft releases monthly. Refer to *Software Installed by the Cisco Unity Server Updates Wizard* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/updates/wizard/cuupwz.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/updates/wizard/cuupwz.html).

For support information, refer to the “Support Policy for Microsoft Service Packs and Updates” section of *Supported Hardware and Software, and Support Policies for Cisco Unity Release 7.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/support/7xcusupp.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/support/7xcusupp.html).

## Software Requirements—Message Store

IBM Lotus Domino and Microsoft Exchange are qualified for use as the message store with Cisco Unity 7.x. See the applicable section:

- [Domino Requirements—Message Store, page 6](#)
- [Exchange Requirements—Message Store, page 8](#)

### Domino Requirements—Message Store

**Revised February 25, 2009**

Domino as the message store on a separate server is supported for Cisco Unity 7.x systems configured for Unified Messaging or Voice Messaging, with the following required software:

- A supported version of IBM Lotus Notes on the Cisco Unity server. See [Table 1](#) below.
- A supported version of IBM Lotus Domino Unified Communications (DUC) for Cisco on Domino servers (see [Table 1](#) below), in addition to the following:
  - The server component of DUC for Cisco—csServer—is required on each Domino server that hosts a mail file or mail file replica that belongs to a Cisco Unity subscriber.
  - The Domino domain directory database must be updated with csAdmin, the administration component of DUC for Cisco.
- A supported version of Domino on Domino servers. See [Table 1](#) below.
- A supported operating system version on Domino servers running DUC for Cisco. See [Table 1](#) below.

DUC for Cisco is available for download from the Cisco Downloads website. (Go to <http://tools.cisco.com/support/downloads/pub/Redirect.x?mdfid=278875240>. In the tree control, expand Unified Communications Applications > Voice Mail and Unified Messaging > Cisco Unity, then browse to the applicable version.)

Up to 7,500 Cisco Unity subscribers can be created in a Domino domain. The subscribers can be homed on one or more Cisco Unity servers or failover pairs.



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**Note**

Cisco assumes that the message store environment is already set up and working before the Cisco Unity system is installed.

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**Table 1 Supported Version Combinations of Required Software for Domino as the Message Store**

DUC for Cisco Version on Domino Server	Notes Version on Cisco Unity Server	Domino Version on Domino Server	Operating System on Domino Server Running DUC for Cisco
1.2.5	8.5.x <sup>1</sup> 8.0.x <sup>1</sup> 7.0.x	8.5.x (32-bit only) <sup>1,2</sup>	Novell SUSE Linux Enterprise Server 10 x86_64 (64-bit) Novell SUSE Linux Enterprise Server 10 x86 (32-bit) Red Hat Enterprise Linux 5 (64-bit or 32-bit) <sup>3</sup> IBM AIX 6.1 (64-bit kernel only) IBM AIX 5.3 (64-bit kernel only) Windows Server 2003 (64-bit or 32-bit) Windows 2000 Server
		7.0.x	Novell SUSE Linux Enterprise Server 9 (64-bit or 32-bit) <sup>3</sup> Novell SUSE Linux Enterprise Server 8 (32-bit) <sup>3</sup> Red Hat Enterprise Linux 5 (64-bit <sup>3</sup> or 32-bit) Red Hat Enterprise Linux 4 (64-bit or 32-bit) <sup>3</sup> IBM AIX 5.3 (64-bit kernel only) Windows Server 2003 (64-bit or 32-bit) Windows 2000 Server
1.2.4	8.0.x <sup>1</sup> 7.0.x 6.5.4 and later	8.0.1 and later (32-bit only) <sup>2</sup>	IBM AIX 5.3 (64-bit kernel only) Windows Server 2003 (32-bit only)
		7.0.x 6.5.4 and later	Windows 2000 Server
1.2.3	7.0.x 6.5.x	7.0.x	IBM AIX 5.3 (64-bit or 32-bit kernel)
		6.5.x	IBM AIX 5.2 (64-bit or 32-bit kernel) IBM AIX 5.1 (64-bit or 32-bit kernel) Windows Server 2003 (32-bit only) Windows 2000 Server

**Footnotes for Table 1—Domino as the Message Store**

1. Notes 8.x and Domino 8.5.x require additional installation or upgrade steps on the Cisco Unity server. See the “Omissions” section under “Documentation Updates” in the *Release Notes for Cisco Unity Release 7.0(2)* at

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/release/notes/702curelnotes.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/release/notes/702curelnotes.html).

2. DUC for Cisco does not support the 64-bit version of Domino 8.0.1 and later or 8.5.x.

3. For additional interoperability requirements (for example, required patches or service packs) when running DUC for Cisco on a Domino server with this version of Linux, see the *IBM Lotus Domino Unified Communications for Cisco Administration Guide* at

[http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_maintenance_guides_list.html).

**For additional Domino-related requirements, see the following sections:**

- [Active Directory Requirements, page 14](#)

- [Network Requirements, page 15](#)
- [Requirements for Using Message Store Clusters, page 17](#)
- [Requirement for Domino Partitioning, page 18](#)

## Exchange Requirements—Message Store

- [Supported Exchange Installations for Cisco Unity Mailboxes—Message Store, page 8](#)
- [Required Software—Message Store, page 9](#)
- [Minimum Service Packs Required—Message Store, page 10](#)
- [Recommended Service Packs—Message Store, page 11](#)
- [Exchange-Related Considerations—Message Store, page 11](#)

### Supported Exchange Installations for Cisco Unity Mailboxes—Message Store

**Revised May 4, 2009**

[Table 2](#) shows the supported installations when Exchange is used to home mailboxes for Cisco Unity subscribers on a Cisco Unity 7.x system.

**Table 2**      *Using Exchange to Home Mailboxes for Cisco Unity Subscribers*

<b>Cisco Unity Configuration</b>	<b>Supported Exchange Installation for Mailboxes</b>
Unified Messaging	<ul style="list-style-type: none"> <li>• Exchange 2007 on a separate server.</li> <li>• Exchange 2003 on a separate server.</li> <li>• Exchange 2000 on a separate server.</li> </ul>

**Table 2** Using Exchange to Home Mailboxes for Cisco Unity Subscribers (continued)

Cisco Unity Configuration	Supported Exchange Installation for Mailboxes
Voice Messaging	<ul style="list-style-type: none"> <li>• Exchange 2007 on a separate server.</li> <li>• Exchange 2003 on the Cisco Unity server or on a separate server.</li> <li>• Exchange 2000 on the Cisco Unity server or on a separate server. (Applies to systems upgraded from Cisco Unity 4.x or 5.x only. Exchange 2000 is not supported for new installations in a Voice Messaging configuration, either on the Cisco Unity server or on a separate server.)</li> </ul>
Mixed Unified Messaging and Voice Messaging	<p>Mailboxes for Unified Messaging subscribers:</p> <ul style="list-style-type: none"> <li>• Exchange 2007 on a separate server.</li> <li>• Exchange 2003 on a separate server.</li> <li>• Exchange 2000 on a separate server.</li> </ul> <p>Mailboxes for Voice Messaging subscribers:</p> <ul style="list-style-type: none"> <li>• Exchange 2007 on a separate server.</li> <li>• Exchange 2003 on a separate server.</li> <li>• Exchange 2000 on a separate server. (Applies to systems upgraded from Cisco Unity 4.x or 5.x only. Exchange 2000 is not supported for new installations in a Voice Messaging configuration, either on the Cisco Unity server or on a separate server.)</li> </ul> <p>An Exchange mailbox store that homes mailboxes for Unified Messaging subscribers must not be on the same Exchange server as a mailbox store that homes mailboxes for Voice Messaging subscribers.</p>

**Required Software—Message Store****Revised May 4, 2009**

Exchange as the message store is supported for a Cisco Unity 7.x system with the following required software:

- A supported version of Microsoft Exchange Server:
  - Exchange Server 2007 Enterprise Edition OR Standard Edition
  - Exchange Server 2003 Enterprise Edition OR Standard Edition
  - Voice Mail Run-Time Edition of Microsoft Exchange Server 2003 Enterprise Edition

Cisco Unity ships with this version, which is for use only in the Voice Messaging configuration.

**Caution**

Regarding the following Exchange 2000 editions: When Windows Server 2003 is installed on the Cisco Unity server, Exchange 2000 is supported as the message store only when an Exchange Server 2003 server is available to be the partner Exchange server.

- Exchange 2000 Server Enterprise Edition OR Standard Edition

In a Unified Messaging configuration, these editions are supported for all new 7.x installations and upgrades. In a Voice Messaging configuration, they are supported only for systems upgraded from Cisco Unity 4.x or 5.x.

- Voice Mail Run-Time Edition of Microsoft Exchange 2000 Server Enterprise Edition  
Cisco Unity no longer ships with this edition, but you can use it in the Voice Messaging configuration on systems upgraded from Cisco Unity 4.x or 5.x.
- Exchange 2000 Conferencing Server  
This edition is supported only in the Unified Messaging configuration on systems upgraded from Cisco Unity 4.x or 5.x.
- The applicable server licenses:
  - Customers who are using the Voice Mail Run-Time Edition of either Exchange 2003 or Exchange 2000 are responsible for providing only the Windows Server license for each operating system environment.
  - Customers who are using a supported version of Exchange other than a Voice Mail Run-Time Edition are responsible for providing the Windows Server license for each operating system environment and are responsible for the Exchange Server server license.
- Client Access Licenses (CALs) must be purchased for all configurations except Cisco Unity Voice Messaging with:
  - Exchange Server 2007 software provided by the customer.
  - The Voice Mail Run-Time Edition of Exchange 2003.
  - The Voice Mail Run-Time Edition of Exchange 2000.

CALs provided by Cisco can be used only for a Voice Messaging configuration. The Cisco-provided CALs cannot be used on systems that are used for email messages.
- The service packs listed in the following section, “[Minimum Service Packs Required—Message Store](#).” For information on installing Exchange service packs on servers other than the Cisco Unity server, refer to the Microsoft website.

### Minimum Service Packs Required—Message Store

- Exchange 2007 Service Pack 1 Update Rollup 4:
  - On Exchange 2007 servers that are running Windows Server 2008. Without the update rollup, message waiting indicators will not function properly. See Microsoft KB article 952580.
- Exchange 2003 Service Pack 2:
  - On the Cisco Unity server when Exchange 2003 software is installed on the server.
  - In a Voice Messaging configuration, on the separate Exchange 2003 servers, if any.
- Exchange 2000 Service Pack 3:
  - On the Cisco Unity server when Exchange 2000 software is installed on the server.
  - In a Voice Messaging configuration, on the separate Exchange 2000 servers, if any.
- Exchange 2000 Post-Service Pack 3 Update Rollup:
  - On the Cisco Unity server when Exchange 2000 software is installed on the server.
  - In a Voice Messaging configuration, on the separate Exchange 2000 servers, if any.

The rollup (described in Microsoft Knowledge Base article 870540) is automatically installed when you run the Cisco Unity Server Updates wizard and choose to install Microsoft updates for Exchange.

We recommend that you update the Cisco Unity server and/or message store servers, as applicable, with the Exchange service packs listed in the “[Recommended Service Packs—Message Store](#)” section below. Some of the service pack may be more recent than the minimum required service packs listed in this section. In addition, we recommend that you update the Cisco Unity server with the security updates that Microsoft releases monthly. Refer to *Software Installed by the Cisco Unity Server Updates Wizard* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/updates/wizard/cuupwz.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/updates/wizard/cuupwz.html).

### Recommended Service Packs—Message Store

#### Revised October 26, 2009

- Exchange 2007 Service Pack 2

For support information, refer to the “Support Policy for Microsoft Service Packs and Updates” section of *Supported Hardware and Software, and Support Policies for Cisco Unity Release 7.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/support/7xcusupp.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/support/7xcusupp.html).

### Exchange-Related Considerations—Message Store

#### Revised May 4, 2009

- If subscribers will be homed in Exchange 2007 and one of the following conditions is true:
  - You will be creating Cisco Unity Trusted Internet subscribers
  - You will be using AMIS, the Cisco Unity Bridge, or VPIM to integrate Cisco Unity with another voice-messaging system

you must retain an Exchange 2003 or an Exchange 2000 server in the forest for the Cisco Unity Voice Connector for Microsoft Exchange. A version of the Voice Connector is not currently available for Exchange 2007.

- When Cisco Unity failover is configured on a system in the Unified Messaging configuration, Exchange must be installed on a separate server from the primary and secondary servers. You can use any supported version of Exchange (except the Voice Mail Run-Time Editions) for the message store.

When Cisco Unity failover is configured on a system in the Voice Messaging configuration, you can install Exchange either on a separate server from the primary and secondary servers or on the secondary server. Note the following:

- If you install Exchange on a separate server, you can install any supported version of Exchange.
- If you install Exchange on the secondary server, you must install Exchange Server 2003. In addition, there is a lower limit on the number of Cisco Unity subscribers. For information on the maximum number of subscribers supported in this configuration, refer to the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).

See also the “Requirements for Cisco Unity Failover” section on page 18.



#### Note

For Cisco Unity configurations with Exchange installed on a separate server, Cisco assumes that the message store environment is already set up and working before the Cisco Unity system is installed.

#### For additional Exchange-related requirements, see:

- [Active Directory Requirements, page 14](#)
- [Network Requirements, page 15](#)
- [Requirements for Using Message Store Clusters, page 17](#)

## Software Requirements—Subscriber Workstations

### Revised May 4, 2009

- An operating system that is compatible with the version of Cisco Unity that you are installing.
- An Internet browser that is compatible with the version of Cisco Unity that you are installing, for subscribers to access the Cisco PCA.
- A messaging client that is compatible with the version of Cisco Unity that you are installing, for subscribers to access voice messages by using ViewMail for Outlook or the client component of DUC for Cisco. In addition:
  - Use of Domino Web Access and Lotus iNotes requires Internet Explorer 7.x, or Internet Explorer 6.0 with Service Pack 1 on the subscriber workstation.



#### Note

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Accessing Cisco Unity voice messages by using a client that is running on a virtualized workstation is not supported.

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For compatible versions of the required software, see *Compatibility Matrix: Cisco Unity and the Software on Subscriber Workstations* at

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/compatibility/matrix/cuclientmtx.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/compatibility/matrix/cuclientmtx.html).

## Language Requirements for Third-Party Software

Required languages for the applications listed in the “[List of Third-Party Software](#)” section on page 13 depend on the Windows locale on the Cisco Unity server.



#### Caution

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To use the Cisco Unity Server Updates wizard to install Microsoft updates for Windows, SQL Server 2000 or MSDE 2000, Internet Explorer, and Exchange, you must install the English-language version of those applications. If you install them in another language, you must download Microsoft updates from the Microsoft website.

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[Table 3](#) lists the required languages for French, German, Japanese, and U.S. English locales. For locales not listed in the table, U.S. English versions are required for all software.

Note that the locale on the Cisco Unity server must match one of the installed Cisco Unity languages (for example, if you choose French as the locale, then the French Cisco Unity system-prompt set must also be installed).

**Table 3** Required Languages for Third-Party Software

Windows Locale on Cisco Unity Server	Required Language for Third-Party Software
French	French versions are required for all software (see the “ <a href="#">List of Third-Party Software</a> ” section on page 13) except the following four applications: <ul style="list-style-type: none"> <li>• IBM Lotus Domino Unified Communications (DUC) for Cisco—French or U.S. English is required.</li> <li>• Microsoft MSXML—U.S. English is required.</li> <li>• Microsoft MDAC—U.S. English is required.</li> </ul>
German	German versions are required for all software (see the “ <a href="#">List of Third-Party Software</a> ” section on page 13) except the following four applications: <ul style="list-style-type: none"> <li>• IBM Lotus Domino Unified Communications (DUC) for Cisco—German or U.S. English is required.</li> <li>• Microsoft MSXML—U.S. English is required.</li> <li>• Microsoft MDAC—U.S. English is required.</li> </ul>
Japanese	Japanese versions are required for all software (see the “ <a href="#">List of Third-Party Software</a> ” section on page 13) except the following four applications: <ul style="list-style-type: none"> <li>• IBM Lotus Domino Unified Communications (DUC) for Cisco—Japanese or U.S. English is required.</li> <li>• Microsoft MSXML—U.S. English is required.</li> <li>• Microsoft MDAC—U.S. English is required.</li> </ul>
U.S. English	U.S. English versions are required for all software (see the “ <a href="#">List of Third-Party Software</a> ” section on page 13).
Locales not listed in this table	U.S. English versions are required for all software (see the “ <a href="#">List of Third-Party Software</a> ” section on page 13).

## List of Third-Party Software

Depending on the Windows locale on the Cisco Unity server, the following software must be installed in the languages listed in [Table 3](#):

- Cisco Unity ViewMail for Microsoft Outlook
- IBM Lotus Domino
- IBM Lotus Domino Unified Communications (DUC) for Cisco
- IBM Lotus Notes
- Microsoft Exchange
- Microsoft Internet Explorer
- Microsoft MDAC
- Microsoft MSXML
- Microsoft Outlook
- Microsoft SQL Server or MSDE

- Microsoft Windows

## Active Directory Requirements

See the applicable section:

- [Active Directory Requirements—Cisco Unity Unified Messaging, page 14](#)
- [Active Directory Requirements—Cisco Unity Voice Messaging, page 15](#)
- [Active Directory Requirements—Cisco Unity Voice-Recognition Server, page 15](#)

(For information on the characteristics of the Unified Messaging and Voice Messaging configurations, see the “[Characteristics of Cisco Unity Configurations](#)” section on page 30.)

## Active Directory Requirements—Cisco Unity Unified Messaging

**Revised January 8, 2009**

- The Cisco Unity server typically is a member server in an Active Directory 2008, Active Directory 2003 or Active Directory 2000 domain. All domain and forest functional levels are supported, including the levels formerly known as mixed mode and native mode.
- Each Cisco Unity server requires access to one or more global catalog servers. Each Cisco Unity server also requires access to one or more read/write Active Directory domain controllers in the following domains:
  - In the domain that contains that Cisco Unity server.
  - In every domain that contains Active Directory objects for subscribers, contacts, distribution lists, or locations that are homed on that Cisco Unity server.

The domain controller and the global catalog server can be the same server. More than one Cisco Unity server can access the same read/write Active Directory domain controller and global catalog server.

- You must install Cisco Unity 7.0 Engineering Special 7 or later on the Cisco Unity server in the following instances:
  - When the Cisco Unity server is a member server in an Active Directory 2008 domain.
  - When Active Directory objects for Cisco Unity subscribers, contacts, distribution lists, or locations were created in an Active Directory 2008 domain.

Engineering specials are available at

<http://tools.cisco.com/support/downloads/go/Redirect.x?mdfid=278875240>. (From the Downloads page, expand Unified Communications Applications > Voice Mail and Unified Messaging > Cisco Unity, and click Cisco Unity Version 7.0 > Unity System Software.)

- When Exchange is the message store, mailboxes for Cisco Unity subscribers can be homed on Exchange servers in any domain in the forest.
- If you want to install the Cisco Unity server in a forest other than the corporate forest and still have users log on to the Cisco Unity Assistant and/or the Cisco Unity Inbox web tools by using user credentials in the corporate forest, you must use the GrantUnityAccess utility to associate Cisco Unity subscribers with Active Directory accounts. For more information, see the “Cisco Unity with Exchange: Using Logon Credentials from Active Directory Accounts in a Different Forest” section in *Release Notes for Cisco Unity 7.0(2)* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/release/notes/702curelnotes.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/release/notes/702curelnotes.html).

## Active Directory Requirements—Cisco Unity Voice Messaging

Revised January 8, 2009

- The Cisco Unity server is a domain controller/global catalog server (DC/GC) in its own Active Directory 2003 or Active Directory 2000 domain, or is a member server in an existing Active Directory 2008, Active Directory 2003, or Active Directory 2000 domain. All domain and forest functional levels are supported, including the levels formerly known as mixed mode and native mode.
- Each Cisco Unity server requires access to one or more global catalog servers. Each Cisco Unity server also requires access to one or more read/write Active Directory domain controllers in the following domains:
  - In the domain that contains that Cisco Unity server.
  - In every domain that contains Active Directory objects for subscribers, contacts, distribution lists, or locations that are homed on that Cisco Unity server.

The domain controller and the global catalog server can be the same server. More than one Cisco Unity server can access the same read/write Active Directory domain controller and global catalog server.

- You must install Cisco Unity 7.0 Engineering Special 7 or later on the Cisco Unity server in the following instances:
  - When the Cisco Unity server is a member server in an Active Directory 2008 domain.
  - When Active Directory objects for Cisco Unity subscribers, contacts, distribution lists, or locations were created in an Active Directory 2008 domain.

Engineering specials are available at

<http://tools.cisco.com/support/downloads/go/Redirect.x?mdfid=278875240>. (From the Downloads page, expand Unified Communications Applications > Voice Mail and Unified Messaging > Cisco Unity, and click Cisco Unity Version 7.0 > Unity System Software.)

- When Exchange is the message store, mailboxes for Cisco Unity subscribers can be homed on Exchange servers in any domain in the forest.
- If you want to install the Cisco Unity server in a forest other than the corporate forest and still have users log on to the Cisco Unity Assistant and/or the Cisco Unity Inbox web tools by using user credentials in the corporate forest, you must use the GrantUnityAccess utility to associate Cisco Unity subscribers with Active Directory accounts. For more information, see the “Cisco Unity with Exchange: Using Logon Credentials from Active Directory Accounts in a Different Forest” section in *Release Notes for Cisco Unity 7.0(2)* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/release/notes/702curenotes.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/release/notes/702curenotes.html).

## Active Directory Requirements—Cisco Unity Voice-Recognition Server

The Cisco Unity voice-recognition server is a workgroup server or is a member server in the same domain as the Cisco Unity server. Making the voice-recognition server a domain controller or global catalog server is not supported.

## Network Requirements

Revised September 11, 2008

In general, the Cisco Unity server must be connected to the network so that it has access to the message store, the directory, and network utilities. The only exception is when Cisco Unity is configured as Voice Messaging, Exchange is installed on the Cisco Unity server, the Cisco Unity server is a domain controller/global catalog server in its own forest, failover is not configured, and Cisco Unity is integrated with the phone system by using voice cards; in that configuration, a network connection is not required.

- For new installations, a minimum network bandwidth of 100 Mbps between the Cisco Unity server and the servers listed below. (Existing Voice Messaging configurations that were installed under the previous 10 Mbps requirement are not required to upgrade unless insufficient bandwidth begins to affect Cisco Unity performance.)

When IBM Lotus Domino is the message store:

- The Domino server that Cisco Unity uses for importing subscribers and lists from the primary subscriber address book, and that it monitors for changes to the Domino directory.
- The Domino Server to which Cisco Unity sends voice messages.
- Any Domino server on which Cisco Unity subscriber mailboxes are homed.

When Microsoft Exchange is the message store:

- The partner Exchange server.
- Any Exchange server on which Cisco Unity subscriber mailboxes are homed.
- The domain controller that Cisco Unity monitors for directory updates.
- The global catalog server that Cisco Unity monitors for directory updates.
- The global catalog server with which the Cisco Unity MAPI client communicates.

When assessing network bandwidth, consider the following:

- Other traffic on the network between the Cisco Unity server and the listed servers and how that affects available bandwidth.
- The number of voice messages per hour.
- The codec being used for recording voice messages. (For example, G.711 is about 480 KB/minute while G.729a is about 60 KB/minute. For a list of supported codecs and the size of voice messages for each codec, see the “Best Practices for Managing Subscriber Mailbox Size” section in the “Configuring Cisco Unity for Maintenance Tasks” chapter of the applicable *Maintenance Guide for Cisco Unity* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_maintenance_guides_list.html).)

- Note the following firewall-configuration issues:

When IBM Lotus Domino is the message store, the Cisco Unity server cannot be separated by a firewall from:

- Domino servers on which mailboxes for Cisco Unity subscribers are homed.
- The Domino server that Cisco Unity monitors for changes to the directory.
- The Domino Server to which Cisco Unity sends voice messages. (This is the Domino server that the installer specifies while installing IBM Lotus Notes on the Cisco Unity server. Cisco Unity delivers all voice messages to Mail.box on this server for routing.)
- The domain controller on which the Cisco Unity installation and services accounts are created.

When Microsoft Exchange is the message store, the Cisco Unity server cannot be separated by a firewall from:

- The partner Exchange server.
- The domain controller that Cisco Unity monitors for directory updates.
- The global catalog server that Cisco Unity monitors for directory updates.
- The global catalog server with which the Cisco Unity MAPI client communicates.

In addition, the partner Exchange server cannot be separated by a firewall from the domain controllers and the global catalog server that the partner server communicates with.

For firewall requirements for failover and standby redundancy, see the applicable sections:

- [Failover Requirements for Separating Cisco Unity Servers by a Firewall, page 22.](#)
- [Standby Redundancy Requirements for Separating Cisco Unity Servers by a Firewall, page 25](#)

The Cisco Unity server cannot be separated by a firewall from a Cisco Unity voice-recognition server.

For details on the TCP/UDP ports that must be opened in a firewall to allow communication between Cisco Unity and other servers, refer to the “IP Communications Required by Cisco Unity” chapter in the *Security Guide for Cisco Unity 5.x* at

[http://www.cisco.com/en/US/products/sw/voicew/ps2237/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicew/ps2237/prod_maintenance_guides_list.html).

(All 5.x content applies to version 7.x as well.)

- If the Cisco Unity server contains a dual NIC, the two NICs must be configured for fault tolerance using a single IP address, or one of the NICs must be disabled. Configuring the two NICs with distinct IP addresses for network load balancing is not supported.
- If Cisco Unity connects to Media Gateway units (PIMG or TIMG) over a WAN, the requirements for the WAN network connection are:
  - For G.729a codec formatting, a minimum of 32.76 Kbps guaranteed bandwidth for each voice messaging port.
  - For G.711 codec formatting, a minimum of 91.56 Kbps guaranteed bandwidth for each voice messaging port.
  - No network devices that implement network address translation (NAT).

## Requirements for Using Message Store Clusters

See the applicable section:

- [Domino Requirements—Message Store Clusters, page 17](#)
- [Exchange Requirements—Message Store Clusters, page 18](#)

### Domino Requirements—Message Store Clusters

- Clusters on the same Domino server or on separate Domino servers is supported. (Clusters on the same Domino server assumes that you are using Domino partitioning. See also the “[Requirement for Domino Partitioning](#)” section on page 18.)
- You must install csServer, the server component of IBM Lotus Domino Unified Communications (DUC) for Cisco, on each clustered server on which mail files for Cisco Unity subscribers are homed.

## Exchange Requirements—Message Store Clusters

**Revised May 19, 2009**

Homing Exchange mailboxes for Cisco Unity subscribers in an Exchange cluster is supported with the following versions:

- Exchange 2007 clusters—all four types are supported: cluster continuous replication (CCR), local continuous replication (LCR), single copy cluster (SCC), and standby continuous replication (SCR)

To home Exchange mailboxes for Cisco Unity subscribers in an Exchange 2007 cluster, you must install Cisco Unity 7.0 Engineering Special 17 or later on the Cisco Unity server. Engineering specials are available at

<http://tools.cisco.com/support/downloads/go/Redirect.x?mdfid=278875240>. (From the Downloads page, expand Unified Communications Applications > Voice Mail and Unified Messaging > Cisco Unity, and click Cisco Unity Version 7.0 > Unity System Software.)

- Exchange 2003 clusters
- Exchange 2000 clusters

Do not install the following software on a server in an Exchange cluster:

- Cisco Unity software
- Cisco Unity Voice Connector for Microsoft Exchange software

Clustered Exchange servers require special hardware that Cisco does not provide and advanced knowledge of Windows and of Exchange clusters. Cisco will not help with configuration or support of the Exchange cluster; it is the responsibility of the customer to obtain support for the Exchange cluster.

## Requirement for Domino Partitioning

Each partition must have its own IP address. For information on configuring and using Domino partitioning, refer to the IBM Domino documentation.

## Requirements for Cisco Unity Failover

See the applicable section:

- [Failover Requirements When the Message Store Is Installed on a Separate Platform, page 19](#)
- [Failover Requirements When the Message Store Is Installed on the Secondary Cisco Unity Server, page 19](#)
- [Failover Requirements When the Message Store Is Installed on the Primary Cisco Unity Server, page 20](#)
- [Failover Requirements for Separating Cisco Unity Servers by a Firewall, page 22](#)
- [Failover Requirement for Separating the Cisco Unity Servers from a Voice-Recognition Server by a Firewall, page 22](#)
- [Failover Requirements for Installing Cisco Unity Servers in Separate Buildings or Sites, page 22](#)



**Note**

For standby redundancy requirements, see the “[Requirements for Standby Redundancy](#)” section on [page 23](#).

## Failover Requirements When the Message Store Is Installed on a Separate Platform

Revised September 4, 2009

- Both Cisco Unity servers must appear on the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html) and must belong to the same platform overlay.
- The network must meet the requirements listed in the “[Network Requirements](#)” section on page 15.
- One Cisco Unity server is designated the primary server, and the other Cisco Unity server is designated the secondary server.
- Both Cisco Unity servers must be member servers in the same Active Directory domain. Do not install Active Directory on either Cisco Unity server.
- When servers are installed in different locations, each location must have a domain controller/global catalog server.
- The names of both Cisco Unity servers must be unique in the first 14 characters.
- Both Cisco Unity servers must communicate with the same message store server.
- When Exchange is the message store, Exchange administration software must be installed on the primary and secondary servers. Exchange Server must be installed on computers other than the Cisco Unity servers.
- When IBM Lotus Domino is the message store, Lotus Notes must be installed on both Cisco Unity servers. All other IBM Lotus software must be installed on computers other than the Cisco Unity servers.
- Both Cisco Unity servers must connect to the same phone system.
- Both Cisco Unity servers must have the same enabled features and configurations.
- SQL Server 2000 Standard Edition must be installed on both the primary and secondary servers. (MSDE 2000 is not supported on either server with Cisco Unity failover.)
- Cisco Unity and SQL Server 2000 must log on with the same domain account on both the primary and secondary servers.
- MSSQLSERVER and SQLSERVERAGENT services on both Cisco Unity servers must be configured to log on as the same domain account, and the account must belong to the Local Administrators group on each server. SQLSERVERAGENT on the primary server must be able to log on to SQL Server on the secondary server by using Windows NT authentication.
- All software must be installed on the same drive and directories for both primary and secondary servers.
- The same version of Windows must be installed on both Cisco Unity servers.

## Failover Requirements When the Message Store Is Installed on the Secondary Cisco Unity Server

Revised September 4, 2009

**Caution**

If the message store is already installed on a separate platform, do not reconfigure the existing Cisco Unity failover system to move Exchange to the secondary Cisco Unity server. Otherwise, the Cisco Unity failover system will not be supported. Only new installations of Cisco Unity with failover can be configured with Exchange on the secondary server.

- Both Cisco Unity servers must appear on the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html) and must belong to the same platform overlay.
- The network must meet the requirements listed in the “Network Requirements” section on page 15.
- One Cisco Unity server is designated the primary server, and the other Cisco Unity server is designated the secondary server.
- For the Active Directory domain, you must use one of the following configurations:
  - Both Cisco Unity servers are member servers in the same Active Directory domain.
  - The secondary server is a domain controller and the primary server is a member server in the secondary server domain.
- When servers are installed in different locations, each location must have a domain controller/global catalog server.
- The names of both Cisco Unity servers must be unique in the first 14 characters.
- Both Cisco Unity servers must communicate with the same message store server.
- Exchange Server 2003 administration software must be installed on the primary server.
- Exchange Server 2003 must be installed on the secondary server.
- Both Cisco Unity servers must connect to the same phone system.
- Both Cisco Unity servers must have the same enabled features and configurations.
- Cisco Unity must be configured as Voice Messaging. For information on the maximum number of subscribers supported in this configuration, refer to the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).
- SQL Server 2000 Standard Edition must be installed on both the primary and secondary servers. (MSDE 2000 is not supported on either server with Cisco Unity failover.)
- Cisco Unity and SQL Server 2000 must log on with the same domain account on both the primary and secondary servers.
- MSSQLSERVER and SQLSERVERAGENT services on both Cisco Unity servers must be configured to log on as the same domain account, and the account must belong to the Local Administrators group on each server. SQLSERVERAGENT on the primary server must be able to log on to SQL Server on the secondary server by using Windows NT authentication.
- All software must be installed on the same drive and directories for both primary and secondary servers.
- The same version of Windows must be installed on both Cisco Unity servers.

## Failover Requirements When the Message Store Is Installed on the Primary Cisco Unity Server

Revised September 4, 2009

Installing Exchange on the primary server is supported.

However, in a failover configuration with Exchange Server 2003 installed on one of the Cisco Unity servers, we recommend that you install Exchange on the secondary server rather than on the primary server. This ensures that when failover occurs, subscribers continue to have access to the voice messages in Exchange. For the system requirements for the recommended configuration, see the “[Failover Requirements When the Message Store Is Installed on the Secondary Cisco Unity Server](#)” section on page 19.



**Caution**

If the message store is already installed on a separate platform, do not reconfigure the existing Cisco Unity failover system to move Exchange to the primary Cisco Unity server. Otherwise, the Cisco Unity failover system will not be supported. Only new installations of Cisco Unity with failover can be configured with Exchange on the primary server.

The following requirements are for installing Exchange 2003 on the primary server in a failover configuration:

- Both Cisco Unity servers must appear on the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html) and must belong to the same platform overlay.
- The network must meet the requirements listed in the “[Network Requirements](#)” section on page 15.
- One Cisco Unity server is designated the primary server, and the other Cisco Unity server is designated the secondary server.
- For the Active Directory domain, you must use one of the following configurations:
  - Both Cisco Unity servers are member servers in the same Active Directory domain.
  - The primary server is a domain controller and the secondary server is a member server in the primary server domain.
- When servers are installed in different locations, each location must have a domain controller/global catalog server.
- The names of both Cisco Unity servers must be unique in the first 14 characters.
- Both Cisco Unity servers must communicate with the same message store server.
- Exchange Server 2003 administration software must be installed on the secondary server.
- Exchange Server 2003 must be installed on the primary server.
- Both Cisco Unity servers must connect to the same phone system.
- Both Cisco Unity servers must have the same enabled features and configurations.
- Cisco Unity must be configured as Voice Messaging. For information on the maximum number of subscribers supported in this configuration, refer to the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).
- SQL Server 2000 Standard Edition must be installed on both the primary and secondary servers. (MSDE 2000 is not supported on either server with Cisco Unity failover.)
- Cisco Unity and SQL Server 2000 must log on with the same domain account on both the primary and secondary servers.
- MSSQLSERVER and SQLSERVERAGENT services on both Cisco Unity servers must be configured to log on as the same domain account, and the account must belong to the Local Administrators group on each server. SQLSERVERAGENT on the primary server must be able to log on to SQL Server on the secondary server by using Windows NT authentication.

- All software must be installed on the same drive and directories for both primary and secondary servers.
- The same version of Windows must be installed on both Cisco Unity servers.

## Failover Requirements for Separating Cisco Unity Servers by a Firewall

- The message store must be Exchange.



### Caution

When IBM Lotus Domino is the message store, Cisco Unity servers cannot be separated by a firewall from one another, from Domino message store servers, or from the domain controller on which the Cisco Unity installation and services accounts were created. Otherwise, Cisco Unity may not function correctly.

- The network must meet the requirements listed in the “[Network Requirements](#)” section on page 15.
- Exchange cannot be installed on the secondary server.
- The primary server must not be separated by a firewall from:
  - The partner Exchange server.
  - The domain controller that Cisco Unity monitors for directory updates.
  - The global catalog server that Cisco Unity monitors for directory updates.
  - The global catalog server with which the Cisco Unity MAPI client communicates.
- The partner Exchange server cannot be separated by a firewall from the domain controllers and the global catalog server that the partner server communicates with.
- Cisco Unity failover was designed with the expectation that the primary server would generally be the active server. The secondary server must be used as the active server only for brief periods. The problem with the primary server must be resolved promptly, and the primary server must be made the active server again at the earliest opportunity.
- When separating the Cisco Unity primary or secondary servers from one another or from other servers by a firewall, the applicable TCP and UDP ports must be open in the firewall. For details on the TCP/UDP ports used by Cisco Unity and other servers, refer to the “IP Communications Required by Cisco Unity” chapter in the *Security Guide for Cisco Unity Release 5.x* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_maintenance_guides_list.html). (All 5.x content applies to version 7.x as well.)

## Failover Requirement for Separating the Cisco Unity Servers from a Voice-Recognition Server by a Firewall

The Cisco Unity servers must be on the same side of a firewall as a Cisco Unity voice-recognition server.

## Failover Requirements for Installing Cisco Unity Servers in Separate Buildings or Sites

Revised October 29, 2008

- The path of connectivity between the Cisco Unity servers must be gigabit speed or higher with no steady-state congestion.
- The maximum round-trip latency must be no more than 10 ms. A fixed network latency of 5ms or less is a best practice.
- The Cisco Unity servers must not be separated by a firewall.
- When Microsoft Exchange is the message store, the Cisco Unity servers cannot be separated by a firewall from:
  - The partner Exchange server.
  - The domain controller that Cisco Unity monitors for directory updates.
  - The global catalog server that Cisco Unity monitors for directory updates.
  - The global catalog server with which the Cisco Unity MAPI client communicates.
- The partner Exchange server cannot be separated by a firewall from the domain controllers and the global catalog server that the partner server communicates with.
- When IBM Lotus Domino is the message store, the Cisco Unity servers cannot be separated by a firewall from:
  - One another.
  - Domino message store servers.
  - The domain controller on which the Cisco Unity installation and services accounts were created.
- When separating the Cisco Unity servers from other servers by a firewall, the applicable TCP and UDP ports must be open in the firewall. For details on the TCP/UDP ports used by Cisco Unity and other servers, see the “IP Communications Required by Cisco Unity” chapter in the *Security Guide for Cisco Unity* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_maintenance_guides_list.html).

## Requirements for Standby Redundancy



### Note

For the failover requirements, see the “Requirements for Cisco Unity Failover” section on page 18.

See the applicable section:

- [Standby Redundancy Requirements When the Message Store Is Installed on a Separate Platform, page 23](#)
- [Standby Redundancy Requirements When Exchange Server 2003 Is Installed on the Primary Cisco Unity Server, page 24](#)
- [Standby Redundancy Requirements for Separating Cisco Unity Servers by a Firewall, page 25](#)

## Standby Redundancy Requirements When the Message Store Is Installed on a Separate Platform

Revised September 4, 2009

- Both Cisco Unity servers must appear on the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html) and must belong to the same platform overlay.
- There must be a minimum connection of 100 Mbps between the primary and secondary Cisco Unity servers.
- The network must meet the requirements listed in the “[Network Requirements](#)” section on page 15.
- One Cisco Unity server is designated the primary server, and the other Cisco Unity server is designated the secondary (or standby) server.
- Both Cisco Unity servers must be member servers in the same Active Directory domain. Do not install Active Directory on either Cisco Unity server.
- The names of both Cisco Unity servers must be unique in the first 14 characters.
- Both Cisco Unity servers must communicate with the same message store server.
- When Exchange is the message store:
  - Exchange administration software must be installed on the primary and secondary servers.
  - Exchange Server must be installed on computers other than the Cisco Unity servers.
  - The primary Cisco Unity server must be located in the same LAN as the partner Exchange server.
- When IBM Lotus Domino is the message store, Lotus Notes must be installed on both Cisco Unity servers. All other IBM Lotus software must be installed on computers other than the Cisco Unity servers.
- Both Cisco Unity servers must connect to the same phone system.
- Both Cisco Unity servers must have the same enabled features and configurations.
- SQL Server 2000 Standard Edition must be installed on both the primary and secondary servers. (MSDE 2000 is not supported on either server with Cisco Unity standby redundancy.)
- Cisco Unity and SQL Server 2000 must log on with the same domain account on both the primary and secondary servers.
- MSSQLSERVER and SQLSERVERAGENT services on both Cisco Unity servers must be configured to log on as the same domain account, and the account must belong to the Local Administrators group on each server. SQLSERVERAGENT on the primary server must be able to log on to SQL Server on the secondary server by using Windows NT authentication.
- All software must be installed on the same drive and directories for both primary and secondary servers.
- The same version of Windows must be installed on both Cisco Unity servers.

## Standby Redundancy Requirements When Exchange Server 2003 Is Installed on the Primary Cisco Unity Server

Revised September 4, 2009



**Caution**

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If the message store is already installed on a separate platform, do not reconfigure the existing Cisco Unity system to move Exchange to the primary Cisco Unity server. Otherwise, the Cisco Unity standby redundancy system will not be supported. Only new installations of Cisco Unity with standby redundancy can be configured with Exchange on the primary server.

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- This configuration is supported only when Cisco Unity is installed in a Voice Messaging configuration.
- One Cisco Unity server is designated the primary server, and the other Cisco Unity server is designated the secondary (or standby) server.
- Both Cisco Unity servers must appear on the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html) and must belong to the same platform overlay.
- There must be a connection of 100 Mbps between the primary and secondary Cisco Unity servers.
- The network must meet the requirements listed in the “[Network Requirements](#)” section on page 15.
- If the Cisco Unity servers are being installed into an existing forest, both data centers must have one or more DC/GCs and one or more DNS servers.  
If the Cisco Unity servers are being installed into a new forest, both must be DC/GCs in the same Active Directory domain and have one or more DNS servers.
- The names of both Cisco Unity servers must be 14 characters or shorter.
- Exchange Server 2003 administration must be installed on the secondary server.
- Both Cisco Unity servers must have the same enabled features and configurations.
- SQL Server 2000 Standard Edition must be installed on both Cisco Unity servers. (MSDE 2000 is not supported on either server with Cisco Unity standby redundancy.)
- The SQL Server 2000 services MSSQLSERVER and SQLSERVERAGENT on both Cisco Unity servers must be configured to log on as the same domain account, and the account must belong to the Local Administrators group on each server. SQLSERVERAGENT on the primary server must be able to log on to SQL Server on the secondary server by using Windows NT authentication.
- All software must be installed on the same drive and directories for both Cisco Unity servers.
- The same version of Windows must be installed on both Cisco Unity servers.

## Standby Redundancy Requirements for Separating Cisco Unity Servers by a Firewall

- The message store must be Exchange.



### Caution

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When IBM Lotus Domino is the message store, do not separate Cisco Unity servers by a firewall from one another, from Domino message store servers, or from the domain controller on which the Cisco Unity installation and services accounts were created. Otherwise, Cisco Unity may not function correctly.

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- The network must meet the requirements listed in the “[Network Requirements](#)” section.
- The primary server must be on the same side of the firewall as:
  - The partner Exchange server.
  - The domain controller that Cisco Unity monitors for directory updates.
  - The global catalog server that Cisco Unity monitors for directory updates.
  - The global catalog server with which the Cisco Unity MAPI client communicates.

- The partner Exchange server cannot be separated by a firewall from the domain controllers and the global catalog server that the partner server communicates with.
- Cisco Unity standby redundancy was designed with the expectation that the primary server would generally be the active server. The secondary server must be used as the active server only for brief periods. The problem with the primary server must be resolved promptly, and the primary server must be made the active server again at the earliest opportunity.
- When separating the Cisco Unity primary or secondary servers from one another or from other servers by a firewall, the applicable TCP and UDP ports must be open in the firewall. For details on the TCP/UDP ports used by Cisco Unity and other servers, refer to the “IP Communications Required by Cisco Unity” chapter in the *Security Guide for Cisco Unity 5.x* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_maintenance_guides_list.html). (All 5.x content applies to version 7.x as well.)

## Requirements for Cisco Unity Phone View

- Cisco Unity integrated with a supported version of Cisco Unified Communications Manager. For compatibility information, refer to *SCCP Compatibility Matrix: Cisco Unity, the Cisco Unity-CM TSP, Cisco Unified Communications Manager, and Cisco Unified Communications Manager Express* or *SIP Trunk Compatibility Matrix: Cisco Unity, Cisco Unified Communications Manager, and Cisco Unified Communications Manager Express* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_device\\_support\\_tables\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_device_support_tables_list.html).
- A supported Cisco Unified IP Phone model, with the supported Cisco Unified Communications Manager version firmware installed. For supported phone models, refer to the “Supported Phone Models for Use with Cisco Unity Phone View” section in *Supported Hardware and Software, and Support Policies for Cisco Unity Release 7.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/unity/7x/support/7xcusupp.html](http://www.cisco.com/en/US/docs/voice_ip_comm/unity/7x/support/7xcusupp.html).

## Requirements for More Than 96 Voice Messaging Ports or More Than 7,500 Subscribers on a Cisco Unity Server

- A supported platform. Refer to the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).



### Note

Some servers that support more than 96 voice messaging ports do not support more than 7,500 subscribers.

- Windows Server 2003.
- The /3GB and /userva=2800 switches must be added to the Windows boot.ini file.
- In the Cisco Unity Tools Depot, in the Advanced Settings Tool, the “Messaging - 72 or More Voice Ports - Enable Low-Fragmentation Heap” setting must be enabled.
- For more than 96 voice messaging ports:
  - Cisco Unified Communications Manager integration (either SCCP or SIP trunk).
  - PIMG or TIMG integration.

# Requirements for the Cisco Unity Hospitality and Property Management System Integration

- A Percipia Networks Transient Communications Engine (PTCE) server with software version 4.0.4 or later.
- Cisco Unity is installed in an Exchange 2003 or Exchange 2000 environment. Exchange 2007 is not supported.
- Cisco Unity is installed in a Windows 2003 or Windows 2000 domain.
- Cisco Unity is installed on a server that meets Cisco Unity specifications. Note that the maximum number of voice messaging users supported on each server platform includes all regular subscribers and hotel guests. Refer to the *Cisco Unity Supported Platforms List* at [http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/products_data_sheets_list.html).

Note that the Cisco Unity Hospitality feature is not supported for use with Cisco Unity failover.

## Available Languages for Cisco Unity Components

This section lists the languages in which Cisco Unity components are available.

### **Cisco Personal Communications Assistant**

Chinese-Hong Kong SAR, Chinese-PRC, Chinese-Taiwan, Danish, Dutch-Belgium, English-United States, French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese-Brazil, Russian, Spanish-Colombia, Spanish-Spain

### **Cisco Personal Communications Assistant Help**

English-United States

### **Cisco Unity Administrator**

English-United States, French-France, German, Japanese

### **Cisco Unity Administrator Help**

English-United States, Japanese

### **Cisco Unity Phone View**

Chinese-Hong Kong SAR, Chinese-PRC, Chinese-Taiwan, Danish, Dutch-Netherlands, English-United States, French-France, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese-Portugal, Russian, Spanish-Spain

### **IBM Lotus Domino Unified Communications (DUC) for Cisco—csClient**

Chinese-Simplified, Chinese-Taiwan, English, English-International, French, German, Italian, Japanese, Korean, Portuguese, Spanish

(For information on whether support for other languages has been added, refer to the IBM Lotus Domino website.)

### **IBM Lotus Domino Unified Communications (DUC) for Cisco—csAdmin and csServer**

English, English-International, French, German, Japanese

(For information on whether support for other languages has been added, refer to the IBM Lotus Domino website.)

**System prompts**

Arabic-Saudi Arabia, Catalan-Spain, Chinese-Hong Kong SAR, Chinese-PRC, Chinese-Taiwan, Czech, Danish, Dutch-Belgium, Dutch-Netherlands, English-Australia, English-Canada, English-New Zealand, English-United Kingdom, English-United States, English TTY/TDD-United States, French-Canada, French-France, German, Hungarian, Italian, Japanese, Korean, Norwegian-Bokmål, Polish, Portuguese-Brazil, Portuguese-Portugal, Russian, Spanish-Colombia, Spanish-Spain, Swedish, Welsh-Wales

**Text-to-speech engine**

Chinese-Hong Kong SAR, Chinese-PRC, Chinese-Taiwan, Danish, Dutch-Netherlands, English-United Kingdom, English-United States, French-Canada, French-France, German, Italian, Japanese, Korean, Norwegian-Bokmål, Portuguese-Brazil, Portuguese-Portugal, Spanish-Spain, Swedish

**ViewMail for Outlook**

Chinese-Hong Kong SAR, Chinese-PRC, Chinese-Taiwan, Danish, Dutch-Netherlands, English-United States, French-France, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese-Brazil, Russian, Spanish-Colombia, Spanish-Spain

**ViewMail for Outlook Help**

English-United States

**Voice-recognition engine**

English-United States

**Product documentation for administrators/installers**

English-United States, Japanese

**Product documentation for end users**

English-United States, Japanese

# Numeric and Alphabetic Codes for Supported Languages in Cisco Unity

**Added June 27, 2008**

Use the numeric codes in [Table 4](#) when you are using the Cisco Unity Bulk Import wizard and a CSV file to create or update users. Enter the applicable four- or five-digit numeric code in the CALLERS\_LANGUAGE and SUBSCRIBERS\_LANGUAGE columns for each user.

For more information, refer to the “Using the Cisco Unity Bulk Import Wizard to Create Multiple Subscriber Accounts” section in the “Managing Subscriber Accounts” chapter of the *System Administration Guide for Cisco Unity Release 5.x* at

[http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_maintenance_guides_list.html). (All 5.x content applies to version 7.x as well.)

Use the alphabetic codes in [Table 4](#) to interpret language-related log entries and error codes.

**Table 4** *Codes for Languages Supported in Cisco Unity*

<b>Language</b>	<b>Numeric Code</b>	<b>Alphabetic Code</b>
Arabic-Saudi Arabia	1025	ARA
Catalan-Spain	1027	CAT
Chinese-Hong Kong SAR	3076	ZHH
Chinese-PRC	2052	CHS
Chinese-Taiwan	1028	CHT
Czech	1029	CSY
Danish	1030	DAN
Dutch-Belgium	2067	NLB
Dutch-Netherlands	1043	NLD
English-Australia	3081	ENA
English-Canada	4105	ENC
English-New Zealand	5129	ENZ
English-United Kingdom	2057	ENG
English-United States	1033	ENU
English TTY/TDD-United States	33801	ENX
French-Canada	3084	FRC
French-France	1036	FRA
German-Germany	1031	DEU
Hungarian	1038	HUN
Italian-Italy	1040	ITA
Japanese	1041	JPN
Korean	1042	KOR
Norwegian-Bokmål	1044	NOR
Polish	1045	PLK
Portuguese-Brazil	1046	PTB
Portuguese-Portugal	2070	PTG
Russian	1049	RUS
Spanish-Colombia	9226	ESO
Spanish-Spain (Traditional Sort)	1034	ESP
Swedish	1053	SVE
Welsh-Wales	1106	CYM

# Characteristics of Cisco Unity Configurations

See the applicable section:

- [Cisco Unity Unified Messaging Configuration, page 30](#)
- [Cisco Unity Voice Messaging Configuration, page 30](#)

## Cisco Unity Unified Messaging Configuration

The Cisco Unity Unified Messaging configuration has the following characteristics:

- The Cisco Unity server handles only voice messages and, optionally, text-to-speech (TTS) playback of email messages. Voice and email messages are stored on the message store servers.
- The Cisco Unity server is connected to the network, so it has access to the message store, the directory, and network utilities, such as virus checking and backup.
- Subscribers check messages:
  - With Domino, by using the phone or an email client.
  - With Exchange, by using the phone, the Cisco Unity Inbox, or an email client. (The Cisco Unity Inbox is accessed through the Cisco Personal Communications Assistant, or Cisco PCA.)
- Cisco Unity administration may be performed over the network.
- Subscribers have access to the Cisco Unity Assistant through the Cisco PCA.
- Voicemail and email attributes on subscriber accounts may be administered from a single location by using the Cisco Unity Administrator.

Cisco requires the following certification for anyone installing a Cisco Unity server as a Unified Messaging server:

<b>With Domino</b>	Certified Lotus Professional System Administrator
<b>With Exchange</b>	Microsoft Certified System Engineer

## Cisco Unity Voice Messaging Configuration

The Cisco Unity Voice Messaging configuration has the following characteristics:

- The Cisco Unity server handles only voice messages.
- When the Cisco Unity server is connected to the network:
  - Cisco Unity administration can be performed over the network.
  - Subscribers have access to the Cisco Unity Assistant through the Cisco Personal Communications Assistant (PCA).
  - The server has access to network utilities, such as virus checking and backup, and to the message store and the directory, if they are installed on a separate server.
  - Cisco Unity can be integrated with Cisco Unified Communications Manager and Cisco SIP Proxy Server.
  - Cisco Unity can be integrated with a circuit-switched phone system through Media Gateway units (PIMG or TIMG).

(For information on when the Cisco Unity server must be connected to the network, see the “[Network Requirements](#)” section on page 15.)

- Subscribers check messages:
  - With Domino, by using the phone.
  - With Exchange, by using the phone or from the Cisco Unity Inbox (accessed through the Cisco PCA).
- Email attributes, if any, and voicemail attributes on subscriber accounts must be administered separately.

Cisco requires that anyone installing a Cisco Unity for Domino server in a Voice Messaging configuration have Certified Lotus Professional System Administrator certification.

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